Algebra 2 GHP
Unit #8
WS #7

PRACTICE EXERCISES

Use technology where appropriate.

Determine if the lines passing through the given pairs of points are parallel, perpendicular, or neither. Assume the lines are distinct.

1. (1, 1), (2, 3) and (2, 5), (3, 7)

2. (2, 3), (3, 5) and (1, 5), (2, 7)

3. (3, 3), (6, 5) and (2, −3), (4, −6)

4. (0, 2), (−4, −1) and (3, −5), (6, −9)

5. (−6, 3), (−3, 1) and (3, 0), (6, 0)

6. (2, −5), (4, −10) and (1, 9), (2, −6)

Write an equation of the line parallel to the given line and with the given *y*-intercept.

7. $y = 3x - 4,\ b = -3$ **8.** $y = 2x + 4,\ b = -2$ **9.** $y = -2x - 1,\ b = 3$

10. $y = -4x - 3,\ b = -5$ **11.** $2y = -2x + 4,\ b = 1$ **12.** $3y = -9x + 3,\ b = 7$

Write an equation of the line perpendicular to the given line and with the given *y*-intercept.

13. $y = -2x + 1,\ b = 2$ **14.** $y = -4x + 3,\ b = -2$ **15.** $2y = x - 3,\ b = 5$

16. $3y = x + 1,\ b = 1$ **17.** $3y = 2x + 3,\ b = -1$ **18.** $2y = -5x + 2,\ b = 6$

Determine if the given distinct lines are parallel, perpendicular, or neither.

19. $3y = x - 3,\ 2y = -6x - 12$

20. $4y = -2x + 4,\ y = 2x - 4$

21. $2y = 3x + 2,\ 4y = 6x$

22. $5y = -x,\ 10y = 2x - 10$

Write an equation of the line parallel to the given line with the given *y*-intercept.

23. $7y = 2x,\ b = 3$

24. $4y = -5x,\ b = -3$

25. $2y - 3x = 6,\ b = -4$

26. $3y - 4x = 3,\ b = 5$

Write an equation of the line perpendicular to the given line and with the given *y*-intercept.

27. $5y = 3x + 5,\ b = 4$

28. $3y = 4x - 3,\ b = -5$

29. $3y - 2x = 0,\ b = 2$

30. $2y - x = 0,\ b = -4$

Write an equation of the line perpendicular to the given line and passing through the given point.

31. $7x - 2y = -2,\ (7, 1)$

32. $4x - 3y = -4,\ (-4, 0)$

33. $5x - y - 1 = 0,\ \left(\frac{1}{2}, -\frac{1}{10}\right)$

34. $-2x - y - 1 = 0,\ \left(-\frac{1}{2}, -\frac{1}{4}\right)$